

Term 4**Unit Overview: LKS2 Science****Living Things and Their Habitats****Big Idea: The diversity of organisms, living and extinct, is the result of evolution.**

- ❖ There are many different kinds of plants and animals in the world today and many kinds that once lived but are now extinct. We know about these from fossils. Animals and plants are classified into groups and subgroups according to their similarities. For example, within the group of animals called birds, there are families of birds such as sparrow, and different kinds (species) within a family such as house sparrows, tree sparrows, and great sparrows. Organisms of the same species breed more of the same.
- ❖ Living things are found in certain environments because they have features that enable them to survive there.

National Curriculum Objectives	Substantive knowledge	Vocabulary
<ul style="list-style-type: none"> ❖ Recognise that living things can be grouped in a variety of ways. ❖ Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. ❖ Recognise that environments can change and that this can sometimes pose dangers to living things. 	<ul style="list-style-type: none"> ❖ Know that Carl Linnaeus created the system of classifying living things that is still used globally today. ❖ Know that keys can be used to classify unknown plants or animals. ❖ Know that vertebrates can be grouped into five classes: fish, amphibians, reptiles, birds, and mammals. ❖ Know that invertebrates can be grouped into five classes: molluscs (snails and slugs), annelids (worms), arachnids (spiders), crustaceans (crabs and lobsters) and insects. ❖ Know that green plants can be grouped into two main classes: flowering plants and non-flowering plants. ❖ Know that non-flowering plants include algae, mosses and ferns and that conifers are a subgroup of flowering plants. ❖ Know that environments can change and that this has an impact on the life in a habitat. 	Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate Invertebrate, vertebrate
Working Scientifically Skills		Phonics / polysyllabic words
<u>Classifying:</u> <ul style="list-style-type: none"> ❖ Classify a number of living things in the local environment (plants and animals) and in the wider environment (plants and animals) after completing research. ❖ Use and produce branching databases/dichotomous keys. 		Classification (tion) Hibernation (tion) Environment Conservationist Ecologist
Pattern Seeking		Reading support
<ul style="list-style-type: none"> ❖ Do animals with have? Do plants with have? 		<ul style="list-style-type: none"> ❖ Word mats ❖ Scaffolded recording / choice of recording ❖ Pre teaching of vocab
Researching		Extension deeper thinking
<ul style="list-style-type: none"> ❖ Research and be able to name plants and animals in the wider environment e.g. polar, desert, jungle, etc. ❖ Research global environmental issues and their impact on living things. 		<ul style="list-style-type: none"> ❖ How should I treat the animals and plants I find in a habitat? ❖ How can you tell which class a plant belongs to? ❖ Are grasses flowering plants?

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<p><u>Possible misconceptions</u></p> <p>Some children may think:</p> <ul style="list-style-type: none"> ❖ the death of one of the parts of a food chain or web has no or limited consequences on the rest of the chain. ❖ There is always plenty of food for wild animals. ❖ Animals are only land-living creatures. ❖ Animals and plants can adapt to their habitats, however they change. ❖ All changes to habitats are negative. 	<p><u>Disciplinary knowledge</u></p> <ul style="list-style-type: none"> ❖ Keep a careful record of living things found in different habitats throughout the year (diagrams, tally charts etc.) ❖ Use classification keys to identify unknown plants and animals. ❖ Use secondary sources to find out about how environments may naturally change. ❖ Use secondary sources to find out about human impact, both positive and negative, on environments. 	<p><u>Key People</u></p> <ul style="list-style-type: none"> ❖ Prem Singh Gill (Polar scientist) ❖ Carl Linnaeus ❖ Telma G Laurentino (Evolutionary Biologist) <p><u>Making Connections</u></p> <p>Biodiversity: Sustainability</p>
<p><u>Prior learning</u></p> <ul style="list-style-type: none"> ❖ Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) ❖ Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) ❖ Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans) ❖ Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans). ❖ Identify and name a variety of plants and animals in their habitats, including microhabitats. (Y2 - Living things and their habitats) <p><u>Future learning</u></p> <ul style="list-style-type: none"> ❖ Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats) 	<p><u>British Values</u></p> <ul style="list-style-type: none"> ❖ <u>Democracy</u> Take the views and opinions of others into account. Take turns and instructions from others. ❖ <u>The rule of law</u> Understand the importance of safety rules when working scientifically make choices when planning an investigation as others may have different points of view as to where to start. ❖ <u>Tolerance</u> Scientific discoveries have come from other cultures and religious beliefs often compete with scientific understanding. ❖ <u>Mutual respect</u> Work as a team, discuss findings and Offer support and advice to others. 	<p><u>Christian Values</u></p> <p><u>Courage</u></p> <ul style="list-style-type: none"> ❖ Ask our own questions to support our own understanding of the world and understand that sharing ideas, data, and results (for further testing and development by others) is a key principle of the scientific method. <p><u>Respect</u></p> <ul style="list-style-type: none"> ❖ •Supporting other’s ideas, even if they differ to our own. ❖ •Explore and celebrate research and developments that take place in many different cultures, both past and present. ❖ •Explore how scientific discoveries have shaped the beliefs, cultures and politics of the modern world.

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<ul style="list-style-type: none">❖ Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)❖ Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. (Y6 - Living things and their habitats)❖ Give reasons for classifying plants and animals based on specific characteristics. (Y6 - Living things and their habitats)		<u>Trust</u> <ul style="list-style-type: none">❖ Celebrate everyone's unique ideas and working together collaboratively.
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